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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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QUALCOMM INCORPORATED
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EXAMINER	
YOUNG, JANELLE N	
ART UNIT	**PAPER NUMBER**
2618	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/17/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/17/2007.

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kascanla@qualcomm.com
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Office Action Summary	Application No.	Applicant(s)	
	10/789,516	AU ET AL.	
	Examiner	**Art Unit**	
	Janelle N. Young	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-60* is/are pending in the application.

4a) Of the above claim(s) *17,37 and 57* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,18-36,38-56 and 58-60* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed January 23, 2007 have been fully considered but they are not persuasive.

The applicant argues that Park et al. and/or Hen et al do not teach a method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals to the base station. However, Park et al. teaches the base station transmit a channel with the fixed power and then the mobile station reports the measured value back to the base station on a reverse link channel (Col. 3, line 45-Col. 4, line 6; Col. 8, lines 12-38; and Col. 9, lines 49-60 of Park et al.).

The applicant also ague that Park et al. and/or Hen et al do not teach a method of determining an effective noise power spectral density ($N_{t,i,effective}$) at an access network for one of the access terminals (i) due to a thermal noise power spectral density (N_0) and a sum of chip energy of (E_c) of all channels except pilot channels of at least some of the access terminals that are power controlled by the sector and determining a maximum effective noise power spectral density ($N_{t,max,effective}$) among the access terminals. Park et al. teaches the mobile station transmitting an access channel, reverse, and other channels (such as: traffic and/or control) (Col. 1,, lines 17-29 of Park et al.) Park et al. discloses channel for which power is determined by the pilot channel, but it can also be determined by using traffic and/or a control channel (Col. 3, line 59-

Col. 4, line 6 of Park et al.). In addition, Park et al. teaches calculating the total power spectral density from the noise spectral (N_o) and the traffic chip energy (E_c) (Col. 6, line 52-Col. 7, line 11 and Col. 13, lines 56-67 of Park et al.).

Response to Amendment

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-9, 21-29, & 41-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. (US Patent 6643520) and further in view of Hen et al. (US Patent 2004/0121808).

As for claim 1, Park et al. teaches a method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals to the base station (Fig. 5-6; Col. 3, lines 14-44; and Col. 9, lines 49-60 of Park et al.), the method comprising:

> determining an effective noise power spectral density ($N_{t,i,effective}$) at an access network for one of the access terminals (i) due to a thermal noise power spectral density (N_0) and a sum of chip energy of (E_c) of all channels except pilot channels of at least some of the access terminals that are power controlled by

the sector and determining a maximum effective noise power spectral density ($N_{t,max,effective}$) among the access terminals (Fig. 5-6; Col. 3, lines 14-44; Col. 5, lines 13-33; and Col. 9, lines 49-60 of Park et al.).

What Park et al. does not explicitly teach is methods of setting a reverse activity bit (RAB) and measuring a rise over thermal noise-measured (ROT) representing a load degree of a reverse link.

However Hen et al. teaches a mobile communication system that determines a reverse activity bit (RAB) to signal all of the access terminals that are power controlled by the sector to change the data rates based upon the maximum effective noise power spectral density (Page 4, Para 0061-0063 of Hen et al.).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate the reverse activity bit setting system, as taught by Hen et al., in the reverse link pilot channel signal in the mobile communications system of Park et al., because Park et al. already teaches average energy per chip of pilot channel in antenna vs. power spectral density of total reception signals (Col. 3, lines 8-44 of Park et al.).

The motivation of this combination would be the effect of the base station determines the initial transmission power for a specified channel transmitter adaptively according to a channel condition when transmitting a new traffic or control channel signal in a mobile communications system, as taught by Park et al., because the interference of the channel transmitters can be reduced, with enhanced receiving performance of the mobile station and increasing the utility efficiency of the transmission

power for the base station. The method of setting a reverse activity bit in a mobile communication environment and enabling subscribers in a cell or sector to receive services and to increase a reverse link capacity (Page 1, Para 0003 of Hen et al.).

As for claims 2 & 3, Park et al. teaches a method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals to the base station, further comprising the step of determining whether any of the access terminals contributes a significant load to the sector comprises the step of determining whether the sector is included in an active set by the access terminal (Fig 5 and Col. 2, lines 8-15 of Park et al.).

As for claim 4, Park et al. teaches a method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals to the base station, wherein the step of determining whether any of the access terminals contributes a significant load to the sector further comprises the step of computing a filtered ratio of pilot chip energy to the effective noise power spectral density (E_{cp}/N_t) per antenna for the access terminal (Col. 3, lines 13-44 of Park et al.).

As for claim 5, Park et al. teaches a method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals to the base station, wherein the step of determining whether any of the access terminals contributes a significant load to the sector further comprises the steps of:

determining whether the E_{cp}/N_t per antenna of the access terminal is below a predetermined setpoint by more than a predetermined offset; and ignoring the access terminal if the E_{cp}/N_t per antenna of the access terminal is below the predetermined setpoint by more than the predetermined offset (Col. 5, line 44-20 and Col. 10, lines 9-13 of Park et al.).

As for claim 6, Park et al. teaches a method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals to the base station, wherein the step of determining a maximum effective noise power spectral density ($N_{t,max,effective}$) comprises the step of computing a ratio of the maximum effective noise power spectral density to a thermal noise power spectral density ($N_{t,max,effective}$ $/N_0$) (Col. 6, line 52-Col. 7, line 25 of Park et al.).

As for claim 7, Hen et al. teaches a method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals to the base station, wherein the step of determining a reverse activity bit (RAB) to signal all of the access terminals that are power controlled by the sector to change the data rates comprises the step of setting the RAB to 1 if the $N_{t,max,effective}$ $/N_0$ is greater than a predetermined $N_{t,max,effective}$ $/N_0$ threshold (Fig. 1 & 3; Abstract; Page 1, Para 0017; Page 2, Para 0029 & 0033; Page 3, Para 0050; and Page 4, Para 0054, 0058, & 0061 of Hen et al.).

As for claim 8, Hen et al. teaches a method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link

communications from the access terminals to the base station, wherein the step of determining a reverse activity bit (RAB) to signal all of the access terminals that are power controlled by the sector to change the data rates comprises the step of setting the RAB to 1 if a rise-over-thermal (ROT) ratio is greater than a predetermined ROT threshold regardless of whether the $N_{t,max,effective}$ /$N_0$is greater than a predetermined $N_{t,max,effective}$ /N_0 threshold (Fig. 1 & 3; Abstract; Page 1, Para 0017; Page 2, Para 0029 & 0033; Page 3, Para 0050; and Page 4, Para 0054, 0058, & 0061 of Hen et al.).

As for claim 9, Hen et al. teaches a method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals to the base station, further comprising the steps of:

> determining whether only one access terminal that is power controlled by the sector is active and setting the RAB to 0 if only one access terminal that is power controlled by the sector is active and a rise-over-thermal (ROT) ratio is less than a predetermined ROT threshold (Fig. 1 & 3; Abstract; Page 1, Para 0017; Page 2, Para 0029 & 0033; Page 3, Para 0050; and Page 4, Para 0054, 0058, & 0061 of Hen et al.).

Regarding claim 21, see explanation as set forth regarding claim 1 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 22, see explanation as set forth regarding claim 2 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 23, see explanation as set forth regarding claim 3 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 24, see explanation as set forth regarding claim 4 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 25, see explanation as set forth regarding claim 5 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 26, see explanation as set forth regarding claim 6 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 27, see explanation as set forth regarding claim 7 (method claim) because the claimed base station apparatus for directing access terminals that

are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 28, see explanation as set forth regarding claim 8 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 29, see explanation as set forth regarding claim 9 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 41, see explanation as set forth regarding claim 1 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 42, see explanation as set forth regarding claim 2 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 43, see explanation as set forth regarding claim 3 (method claim) because the claimed computer readable medium containing computer executable

instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 44, see explanation as set forth regarding claim 4 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 45, see explanation as set forth regarding claim 5 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 46, see explanation as set forth regarding claim 6 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 47, see explanation as set forth regarding claim 7 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a

sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 48, see explanation as set forth regarding claim 8 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 49, see explanation as set forth regarding claim 9 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

3. Claims 10-14, 16, 18-20, 30-34, 36, 38-40, 50-54, 56, & 58-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. (US Patent 6643520) and further in view of Hen et al. (US Patent 2004/0121808).

As for claim 10, Park et al. teaches a method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals to the base station, the method comprising:

determining whether any of the access terminals contributes a significant load to the sector (Fig 5 and Col. 2, lines 8-15 of Park et al.);

determining a maximum noise power spectral density ($N_{t,max}$) among the access terminals that contribute a significant load to the sector (Col. 3, lines 14-44 and Col. 5, lines 13-33 of Park et al.); and

computing a ratio of the maximum noise power spectral density to a thermal noise power spectral density ($N_{t,max}/N_o$) (Col. 6, line 52-Col. 7, line 25 of Park et al.).

What Park et al. does not explicitly teach is methods of setting a reverse activity bit (RAB) and measuring a rise over thermal noise-measured (ROT) representing a load degree of a reverse link.

However Hen et al. teaches a mobile communication system that determines a reverse activity bit (RAB) to signal all of the access terminals that are power controlled by the sector to change the data rates based upon the maximum noise power spectral density (Page 2, Para 0021 and Page 4, Para 0061-0063 of Hen et al.).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate the reverse activity bit setting system, as taught by Hen et al., in the reverse link pilot channel signal in the mobile communications system of Park et al., because Park et al. already teaches average energy per chip of pilot channel in antenna vs. power spectral density of total reception signals (Col. 3, lines 8-44 of Park et al.).

The motivation of this combination would be the effect of the base station determines the initial transmission power for a specified channel transmitter adaptively according to a channel condition when transmitting a new traffic or control channel

signal in a mobile communications system, as taught by Park et al., because the interference of the channel transmitters can be reduced, with enhanced receiving performance of the mobile station and increasing the utility efficiency of the transmission power for the base station. The method of setting a reverse activity bit in a mobile communication environment and enabling subscribers in a cell or sector to receive services and to increase a reverse link capacity (Page 1, Para 0003 of Hen et al.).

Regarding claim 11, see explanation as set forth regarding claim 3 (method claim) because the claimed method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 12, see explanation as set forth regarding claim 4 (method claim) because the claimed method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 13, see explanation as set forth regarding claim 5 (method claim) because the claimed method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

As for claim 14, Park et al. teaches a method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals to the base station, wherein the step of

determining whether any of the access terminals contributes a significant load to the sector comprises the steps of:

determining whether a data request channel lock (DRCLock) of the access terminal is unset and ignoring the access terminal if the DRCLock of the access terminal is unset (Page 1, Para 0003, 0014, & 0019 And Page 4, Para 0063 of Hen et a.).

As for claim 16, Park et al. teaches a method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals to the base station, wherein the step of determining a maximum noise power spectral density ($N_{t,max}$) comprises the steps of:

determining a minimum chip energy ($E_{c,min}$) among the access terminals that contribute a significant load to the sector; determining a total received power spectral density (I_0) at the base station; and computing the maximum noise power spectral density by subtracting $E_{c,min}$ from I_0 (Fig 5; Col. 3, lines 14-44; Col. 8, lines 11-38; and Col 9, lines 1-67 of Park et al.).

Regarding claim 18, see explanation as set forth regarding claim 7 (method claim) because the claimed method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 19, see explanation as set forth regarding claim 8 (method claim) because the claimed method of directing access terminals that are power

controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 20, see explanation as set forth regarding claim 9 (method claim) because the claimed method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 30, see explanation as set forth regarding claim 10 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 31, see explanation as set forth regarding claim 11 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 32, see explanation as set forth regarding claim 12 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 33, see explanation as set forth regarding claim 13 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 34, see explanation as set forth regarding claim 14 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 36, see explanation as set forth regarding claim 16 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 38, see explanation as set forth regarding claim 18 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 39, see explanation as set forth regarding claim 19 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 40, see explanation as set forth regarding claim 20 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 50, see explanation as set forth regarding claim 10 (method claim) because the claimed computer readable medium containing computer executable

instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 51, see explanation as set forth regarding claim 11 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 52, see explanation as set forth regarding claim 12 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 53, see explanation as set forth regarding claim 13 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 54, see explanation as set forth regarding claim 14 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a

sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 56, see explanation as set forth regarding claim 16 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 57, see explanation as set forth regarding claim 17 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 58, see explanation as set forth regarding claim 18 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 59, see explanation as set forth regarding claim 19 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 60, see explanation as set forth regarding claim 20 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

4. Claims 15, 35, & 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. (US Patent 6643520) and Hen et al. (US Patent 2004/0121808) and further in view of Lim et al. (US Patent 6731620).

As for claim 15, Park et al. teaches a method of directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals to the base station, wherein the step of determining whether any of the access terminals contributes a significant load to the sector (Col. 3, lines 14-44 and Col. 5, lines 13-33 of Park et al.).

Hen et al. teaches a mobile communication system that determines a reverse activity bit (RAB) to signal all of the access terminals that are power controlled by the sector to change the data rates based upon the maximum noise power spectral density (Page 2, Para 0021 and Page 4, Para 0061-0063 of Hen et al.).

What Park et al. and Hen et al. do not explicitly teach is path loss.

However Lim et al. teaches a method for determining whether a filtered path loss from the access terminal to the base station is above a predetermined threshold and

ignoring the access terminal if the filtered path loss from the access terminal to the base station is above the predetermined threshold. (Abstract of Lim et al.).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate of the method for calculating a propagation path loss of forward and reverse pilot channels depending on the maximum path loss of forward and reverse links for a base station located at a specific distance from a terminal, determined from the minimum E_c/I_t required by the system, as taught by Lim et al., in the reverse link pilot channel signal in the mobile communications system of Park et al. and Hen et al., because Park et al. and Hen et al. already teach average energy per chip of pilot channel in antenna vs. power spectral density of total reception signals (Col. 3, lines 8-44 of Park et al. in respect to Page 4, Para 0062 of Hen et al.).

The motivation of this combination would be the effect of the base station determines the initial transmission power for a specified channel transmitter adaptively according to a channel condition when transmitting a new traffic or control channel signal in a mobile communications system, as taught by Park et al., because the interference of the channel transmitters can be reduced, with enhanced receiving performance of the mobile station and increasing the utility efficiency of the transmission power for the base station. The method of setting a reverse activity bit in a mobile communication environment and enabling subscribers in a cell or sector to receive services and to increase a reverse link capacity (Page 1, Para 0003 of Hen et al.). The incorporation would provide a method for satisfying the performance requirements of respective channels, maximizing the radio capacity and coverage of the system and

maintaining the balance of a forward coverage and a reverse coverage (Col. 2, lines 30-35 of Lim et al.).

Regarding claim 35, see explanation as set forth regarding claim 15 (method claim) because the claimed base station apparatus for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Regarding claim 55, see explanation as set forth regarding claim 15 (method claim) because the claimed computer readable medium containing computer executable instructions embodying for directing access terminals that are power controlled by a sector of a base station to change data rates in reverse link communications from the access terminals would perform the method steps.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle N. Young whose telephone number is (571) 272-2836. The examiner can normally be reached on Monday through Friday: 8:30 am through 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JNY
April 6, 2007

NAY MAUNG
SUPERVISORY PATENT EXAMINER